

REMARKS/ARGUMENTS

Favorable reconsideration of the present application is respectfully requested.

Claims 1-6 and 14-19 have been withdrawn from consideration. Claims 10-12 have been canceled and the subject matter thereof has been incorporated into Claim 7, as have limitations from Claim 9. Claim 7 has further been amended to recite that the processing apparatus comprises a mounting table and a rotating mechanism. Basis for this is found from page 5, line 14 to page 6, line 1. Claim 7 further recites that the high pressure chamber has an introduction wall provided with a fluid introduction passage, and the closure plate is placed between the introduction wall and the mounting table in opposed relation to the surface of the processing object on the mounting table and the introduction wall. Basis for this is found at page 6, lines 14-15. Claim 7 has also been amended to recite that the closure plate is fitted to an internal surface of the high pressure chamber so as to create a gap with the introduction wall and allow the high pressure fluid introduced through the introduction passage to be supplied to the surface of the processing object through the gap and each of the through holes. Basis for this is believed to be evident from the disclosure. New dependent Claim 20 further recites that the closure plate is placed in opposed relation to the entire surface of the processing object.

According to a feature of the invention now set forth in the claims, a high pressure processing apparatus includes a rotating mechanism adapted to rotate the processing object together with a mounting table for supporting the processing object, and a fluid dispersion mechanism for dispersing the flow of the high pressure fluid toward the surface of the processing object, the fluid dispersion mechanism including a closure plate formed with a plurality of through holes.

The high pressure processing apparatus including a rotating device and a fluid dispersion mechanism in the form of a closure plate had been recited in Claims 7 and 10-12.

Claims 7, 8, and 10-12 had been rejected under 35 U.S.C. § 102 as being anticipated by Japanese patent publication 2001-324263 (Ikutsu). With respect to the rotating device of Claim 10, the Office Action had specifically relied on Figure 3. However, it is respectfully submitted that no such rotating device is disclosed in Ikutsu.

Ikutsu discloses a processing apparatus in which a substrate 104 is disposed on a fixed table 103 which is fixed in the process chamber 102. An oblique flow plate 112 is placed between a nozzle 108 and the mounting table 103 but is not fitted to an inner surface of the chamber 101. The nozzle 108 sprays fluid directly to the plate 112.

There is no disclosure in Ikutsu of a rotating mechanism that rotates the processing object together with the mounting table. Applicants suppose that this has been deemed to be present in Ikutsu because of the spiral arrow illustrated in Figure 3 thereof. However, this arrow does not indicate the rotation of the processing object but instead indicates a rotation of the fluid on the substrate 104 which has been rotated by the oblique flow plate 112 (see reference, paragraph [0024]). Indeed, the substrate 104 cannot be rotated since the mounting plate therefor is fixed in the process chamber 102 (reference, paragraph [0020]). The amended claim therefore defines over this reference.

Claim 9 has been rejected under 35 U.S.C. § 103 as being obvious over Ikutsu in view of Japanese Patent Publication 63-073626 (Amana et al). Amana et al discloses an apparatus including a spin chuck 2 and a spin mode 3 for rotating a wafer. Dispersion holes 7 and 8 are provided in a supplying air pipe, and a discharging pipe 17 surrounds the wafer 1. However, neither Ikutsu nor Amana et al discloses a closure plate fitted to an internal surface of a high pressure chamber so as to make a gap for dispersion of high pressure fluid. The claims, including Claim 9, therefore define over any combination of the above references.

Claim 13 was rejected under 35 U.S.C. § 103 as being obvious over Ikutsu in view of Kim, which was cited to teach the further feature that the holes are placed further apart at the

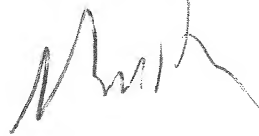
edge of the plate. Kim discloses a plate 10 with a plurality of nozzles 212-214 for supplying a fluid to a wafer. However, the plate 210 is required to be rotated because the wafer W is non-rotatably held by the holders 250. Accordingly, the plate 210 requires an intricate branch passage therein in order to supply the fluid while being rotated. Kim provides no teaching for overcoming the shortcomings of amended Claim 7, and so the claims are believed to define over any combination of the above references.

New dependent Claim 20 further recites that the closure plate is placed in opposed relation to the entire surface of the processing object. This is also not taught in the prior art.

Applicants therefore believe that the present application is in a condition for allowance and respectfully solicit an early Notice of Allowability.

Respectfully submitted,

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